

REMARKS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

Rejection of Claims 1-4, 8-9, 13, 15, 18-19, 21-23 and 27-29 Under 35 U.S.C. §103(a)

The Office Action rejects claims 1-4, 8-9, 13, 15, 18-19, 21-23 and 27-29 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. (U.S. Patent No. 7,050,974) ("Komori") in view of Besling et al. (U.S. Patent No. 6,363,348) ("Besling et al."). Applicants respectfully traverse this rejection and submit that one of skill in the art would not have sufficient motivation or suggestion to combine these references.

Previously, Applicants have submitted the *prima facie* case of the language from the MPEP regarding establishing a *prima facie* case of obviousness. Applicants further note that MPEP 2143.01 also requires that if the blending of the teachings would require modification of the fundamental principles of one or more of the references, then the case of obviousness for combining those references cannot stand. Applicants note that this group of claims is rejected based on the combination of Komori et al. and Besling et al. The Office Action appropriately concedes that Komori et al. fail to teach a controller that receives a stored user profile and updates a stored recognition model based on the profile. The Office Action then proceeds to assert that Besling et al. recites a retrieving means that retrieves the basic recognition module from memory and retrieves the adaptation module and adapts the recognition module under control of the adaptation profile, citing columns 7 and 8. The Office Action asserts that Komori et al. and Besling et al. are analogous art because they are both from similar fields of endeavor regarding speech recognition. The Office Action simply then concludes that it would be obvious to a person of skill in the art to modify the teachings of Komori et al. with the adaptation storage module and retrieving means taught by Besling et al. in order to implement more

efficient speech recognition storage that only requires storing one basic model of a given type and smaller adaptation profiles, citing Besling et al., columns 4 and 5. Applicants respectfully traverse this analysis and submit that, by a preponderance of the evidence, one of skill in the art would not have sufficient motivation or suggestion to combine these references. Furthermore, given the KSR Int'l Co. v. Teleflex, Inc. case, Applicants also submit that there would be no apparent reason why one of skill in the art would combine these elements in the fashion claimed by Applicants and note that the Supreme Court has required that the Examiner make it explicit why one of skill in the art would have an apparent reason to combine such references. Applicants shall next point out why the actual teachings in each of these references would lead one of skill in the art away from combining the references.

First, we turn to Komori et al. This reference focuses on a speech communication system that includes a speech input terminal and a speech recognition apparatus. The terminal and the apparatus communicate through a wired or wireless communication network. The speech input terminal receives input speech and creates environmental information for the speech recognition and communicates the speech and the environmental information to the speech recognition apparatus that executes speech recognition processing on a basis of environmental information. See Abstract. Figure 1 illustrates the speech recognition unit 203 and the speech recognition model holding unit 205. Applicants specifically note that the fundamental principle taught in Komori et al. relates to a modification of the speech recognition model held in the speech recognition model holding unit 205. For example, step S408 as outlined in column 3, starting at line 23, teach that the environmental adaptation unit 201 performs environmental adaptation with respect to a speech recognition model in the speech recognition model holding unit 205 on the basis of the environment information to update the speech recognition model into an environmental adaptation speech recognition model. Each model is then held by the speech

recognition model holding unit 205. In column 3, starting at line 39, they teach that in the case of speaker adaptation, a method of creating a speaker adaptation model by using a speaker adaptation model and speech recognition model can be used. If a speech or acoustic analysis result is sent instead of an environmental information model, the method involves converting the environmental information into a model and further performing adaptation on the main body 200 side. Alternatively, the method of performing environmental adaptation involve a VFS speaker adaptation technique in which speaker information according to this particular person speaking is received and the speech recognition model is adapted according to a speech adaptation process. See column 5, lines 25-35. In sum, Applicants respectfully submit that what is taught in Komori et al. is clearly a process in which a single speech recognition model may be adapted based on noise, a microphone adaptation and/or a particular speaker adaptation. It is clear throughout the teachings of Komori et al. that their primary focus is how to modify the single speech recognition model held in the holding unit 205.

In contrast to the teachings of Komori et al. are the teachings of Besling et al. In this reference, an object of their invention is to enable pattern recognition of a client's server configuration without undue training burden on a user. A further object is to enable pattern recognition in a client server configuration where the server is capable of simultaneously supporting recognition from many user stations. To achieve their object, their method is characterized in that the server comprises a plurality of different recognition models of the same type. See column 4, lines 14-35. Their recognition enrollment step comprises selecting a recognition model from a plurality of different recognition models of the same type in dependence on a model improvement data associated with a user. They store an indication of the selected recognition model and associate it with user identifier and then when recognizing input the retrieve that recognition model associated with the identified user and transfer that to the

service station and incorporate the retrieved recognition model in the model collection. Besling et al., rather than modifying a single recognition model, expressly teach storing a number of recognition models of the same type, such as storing language models each targeted toward a different subject, such as photography, gardening, cars, etc.

The problem identified by Besling et al. and the terms by which it is characterized would direct one of skill in the art away from the teachings of Komori et al. For example, columns 2-4 and specifically column 3, lines 45 through column 4, line 11 of Besling et al., explain that typically user independent pattern recognition systems are provided with user independent recognition models. In order to achieve an acceptable level of recognition, these particularly large vocabulary recognition systems are made user dependent by training the system for a specific user. In some cases, each time a new user uses the system, that new user must be trained or the acoustic references of an acoustic model must be trained for the new user in order to provide sufficient data to enable building a new set of acoustic references for that user. After each dictation session, the recognition unit and the server station retrieve the acoustic references associated with a dictated user and use these to recognize the dictation. Other recognition models, such as a lexicon, vocabulary, language model are also not trained for a specific user and accordingly, each additional user requires a lengthy training period in order for the system to be acceptable. They also note in column 4, that the relatively large amount of acoustic references which need to be stored by the server station for each user makes the system less suitable for large numbers of users. They conclude by stating "using the system for dictating a test in a different field than aimed at by the language model and vocabulary could result in a degraded recognition result." In other words, they are teaching away from a single independent recognition module that is modified for each additional user. Their invention, therefore, is focused on providing a plurality of different recognition models of the same type. Applicants

respectfully submit that this introduction and focus of Besling et al. would teach one of skill in the art to avoid the teaching of Komori et al. in which the fundamental principles of Komori et al. essentially match the independent speech recognition model criticized so harshly by Besling et al. As noted above, an important element of the speech recognition model which is held in the speech recognition model holding unit 205 of Komori et al. is a single recognition model that may be adapted for particular new speakers by receiving speaker adaptation information which is used to update the speech recognition model which is held in unit 205. Accordingly, at its core, Applicants submit that these two references expressly teach away from their combination and certainly there is, by a preponderance of the evidence, no apparent reason to combine these elements inasmuch as Besling et al. criticize the process of using a single independent recognition model that is not trained for a specific user and is updated for a specific user which they state could provide a degraded recognition result. Clearly, Komori et al. focuses on such an approach in which one aspect of the adaptation of the speech recognition model in the speech recognition model holding unit is the speech adaptation technique which fundamentally adopts the approach criticized by Besling et al. rather than providing a plurality of different recognition models of the same type. Accordingly, one or both of the fundamental operations of Komori et al. or Besling et al. would have to be modified in order to accommodate their blending and the requirement for such modification eliminates the possibility that one of skill in the art would have an apparent reason to blend these references. Accordingly, Applicants respectfully submits that claims 1-4, 8-9, 13, 15, 18-19, 21-23 and 27-29 are patentable and in condition for allowance.

Rejection of Claims 5, 6 and 25 Under 35 U.S.C. §103(a)

The Office Action rejects claims 5, 6 and 25 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. in view of Besling et al. and further in view of Kanevsky et al. (U.S. Patent No. 6,442,519) ("Besling et al."). Applicants respectfully traverse this rejection and submit that for the same reasons set forth above, one of skill in the art would not have sufficient motivation or suggestion or reason to combine Besling et al. with Komori et al. Accordingly, Applicants submit that claims 5, 6 and 25 are patentable and in condition for allowance.

Rejection of Claims 7 and 26 Under 35 U.S.C. §103(a)

The Office Action rejects claims 7 and 26 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. in view of Besling et al. and further in view of Hunt et al. (U.S. Patent No. 6,094,476) ("Hunt et al."). Applicants respectfully traverse this rejection and submit that for the reasons set forth above, that one of skill in the art would not have sufficient motivation or suggestion, as well as lacking an apparent reason to combine Besling et al. with Komori et al. Accordingly, Applicants submit that claims 7 and 26 are patentable and in condition for allowance.

Rejection of Claims 10, 17 and 30-31 Under 35 U.S.C. §103(a)

The Office Action rejects claims 10, 17 and 30-31 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. in view of Besling et al. and further in view of Heck et al. (U.S. Patent No. 5,950,157) ("Heck et al."). Applicants traverse this rejection and submit that for the reasons set forth above, that the two primary references of Besling et al. and Komori et al. should not be combined inasmuch as they expressly would expressly teach one of skill in the art away from their combination. Accordingly, Applicants submit that claims 10, 17 and 30-31 are patentable and in condition for allowance.

Rejection of Claims 11-12, 20 and 32 Under 35 U.S.C. §103(a)

The Office Action rejects claims 11-12, 20 and 32 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. in view of Besling et al. and further in view of Cilurzo et al. (U.S. Patent No. 6,434,526) ("Cilurzo et al."). Applicants respectfully traverse this rejection and submit that one of skill in the art would not have sufficient motivation or suggestion, or apparent reason to combine Besling et al. with Komori et al. Accordingly, Applicants submit that claims 11-12, 20 and 32 are patentable and in condition for allowance.

Rejection of Claim 14 Under 35 U.S.C. §103(a)

The Office Action rejects claim 14 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. in view of Besling et al. and further in view of Ranzino et al. (U.S. Patent No. 6,281,811) ("Ranzino et al."). Applicants traverse this rejection and submit that one of skill in the art would not have sufficient motivation or suggestion, or an apparent reason to combine Besling et al. with Komori et al. Accordingly, Applicants submit that claim 14 is patentable and in condition for allowance.

Rejection of Claim 16 Under 35 U.S.C. §103(a)

The Office Action rejects claim 16 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. in view of Besling et al. and further in view of Byers et al. (U.S. Patent No. 6,219,645) ("Byers et al."). Applicants traverse this rejection and submit that one of skill in the art would not have sufficient motivation or suggestion, or an apparent reason to combine Besling et al. with Komori et al. Accordingly, Applicants submit that claim 16 is patentable and in condition for allowance.

Rejection of Claim 24 Under 35 U.S.C. §103(a)

The Office Action rejects claim 24 under 35 U.S.C. §103(a) as being unpatentable over Komori et al. in view of Besling et al. and further in view of Sonmez et al. (U.S. Patent No. 5,745,872) ("Sonmez et al."). Applicants traverse this rejection and submit that one of skill in the art would not have sufficient motivation or suggestion to combine the two primary references or Besling et al. with Komori et al. Accordingly, Applicants submit that claim 24 is patentable and in condition for allowance.

Applicants do not concede that it would be obvious for one of skill in the art to combine the secondary references such as Kanevsky et al., Hunt et al., Heck et al., Cilurzo et al., Ranzino et al., Byers et al. and/or Sonmez et al. with any of the two primary references. However, Applicants submit that inasmuch as the two primary references expressly teach away from their combination as set forth above, that this provides sufficient analysis that a person of ordinary skill in the art would not be motivated or not have an apparent reason to combine these references. As noted above, the Office Action merely asserts that Komori et al. and Besling et al. are analogous arts because they are from a similar field of endeavor in speech recognition model adaptation.

In fact, Applicants traverse the conclusion that Besling et al. is even analogous to Komori et al. Column 4, line 51 of Besling et al. teaches

"Advantageously, also the amount of training data which needs to be supplied by the user can be substantially smaller than the known system. Instead of requiring a sufficient amount of data to fully train a model or to adapt an already existing model, according to the invention, the amount of data needs only to be sufficient to select a suitable model from available models."

Accordingly, not only do Applicants traverse that Komori et al. and Besling et al. are analogous inasmuch as Besling et al. teach away from recognition model adaptation as articulated by the Examiner, the above quote from Besling et al. further provides an explicit

teaching that would direct one of skill in the art away from Komori et al. who certainly focus on as a fundamental principle on their teachings an approach to adaptation of a speech recognition model. Accordingly, for these several reasons, Applicants submit that it is clear that one of skill in the art would not combine these references in the manner outlined in the Office Action and therefore, the present application is patentable and in condition for allowance.

CONCLUSION

Having addressed all rejections and objections, Applicants respectfully submit that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited. If necessary, the Commissioner for Patents is authorized to charge or credit the **Law Office of Thomas M. Isaacson, LLC, Account No. 50-2960** for any deficiency or overpayment.

Respectfully submitted,

By: 

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